

REMARKS

Claims 1-40 are pending in this application. Claims 8-13, 15, 16, 19, 23, 24, 27, 30, 33, 34, 36, and 39 stand rejected and claims 1-7, 14, 17, 18, 20-22, 25, 26, 28, 29, 31, 32, 35, 37, and 38 are objected to. Applicants wish to thank the Examiner for the indication of allowable subject matter in claims 1-7, 14, 17, 18, 20-22, 25, 26, 28, 29, 31, 32, 35, 37, and 38. By this Amendment, claims 1, 20, 28, and 37 have been amended. The amendments made to the claims do not alter the scope of these claims, nor have these amendments been made to define over the prior art. Rather, the amendments to the claims have been made for cosmetic reasons to improve the form thereof. In light of the amendments and remarks set forth below, Applicants respectfully submit that each of the pending claims is in immediate condition for allowance.

Paragraph 1 of the Office Action objects to claims 1-19 for various informalities. Applicants have amended claim 1 in accordance with the Examiner's remarks. Therefore, Applicants respectfully request reconsideration and withdrawal of the objection.

Claims 1-7, 14, 17-25, 18, 20, and 22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,852,443 ("Duncan"). Applicants respectfully request reconsideration and withdrawal of this rejection.

Claims 1 and 20 are structurally distinguishable from Duncan. Duncan's capacitive pressure sensitive apparatus does not have the distinguishable feature recited in the present claims so that it is impossible to replace the percussion pad in claims 1 and 20 with Duncan's pad.

As recited in claims 1 and 20, the base is "held in contact with said accumulator regardless of said each beat". This feature gives rise to the local vibrations of the accumulator, and the elastic strain energy is consumed through the repetition of deformation of selected ones of the pillars. If the array of pillars were usually spaced from the base, the entire percussion pad would vibrate to produce noise, because the

deformed pillars were merely brought into contact with the base only once or twice immediately after the beat. In other words, the only part of the elastic strain energy is consumed through the deformation of selected ones of the pillars, and the remaining part of elastic strain energy is consumed through the vibrations of the entire accumulator. In order to force selected ones of the pillars to continue the vibrations, the base is to be held in contact with the pillars regardless of the beat. The base, which is held in contact with the pillars regardless of the beat as defined in independent claims 1 and 20, permits selected ones of the pillars to be pressed thereon and, thereafter, pulled or expanded, whereby the pillars continue the vibrations. As a result, most of the elastic strain energy is consumed through the local vibrations of the accumulator.

In contrast, as shown in figure 1 of Duncan, the taper's projections (1') are usually spaced from the dielectric layer (2), and several tapered projections (1') are brought into contact with the dielectric layer (2) only when the resilient elastomeric pad electrode (1) is locally pressed onto the dielectric layer (2). The space between the taper's projections (1') and the dielectric layer (2) is inherent in the pressure-sensitive apparatus, because the capacitance is varied through the elastomeric pad electrode (1) locally brought into contact with the dielectric layer (2). If the elastomeric pad electrode (1) were held in contact with the dielectric layer (2) regardless of the pressure exerted thereon, Duncan's pressure-sensitive apparatus could not detect the force exerted on the elastomeric pad electrode (1). Thus, the Applicants assert that the limitations recited in claims 1 and 20 are clearly not shown in Duncan's pressure sensitive apparatus.

Claims 2 to 7, 14, 17 and 18 and claims 22 and 25 are dependent on independent claims 1 and 20, respectively, and the above-described particular feature of the present invention makes the dependent claims also distinguishable from Duncan's pressure-sensitive apparatus. In this situation, the applicants respectfully request the Examiner to reconsider the rejection under 35 USC 102.

Claims 21, 26, 28, 29, 31, 32, 35, 37, 38, and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Duncan in view of U.S. Patent No. 6,586,666 ("Abe") and U.S. Patent Publication No. 2002/0112593 ("Yanase"). Applicant respectfully traverses this rejection.

The rejected claims can be divided into three groups. Claims 21 and 26 are dependent on amended independent claim 20, and belong to the first group. Claims 28 and 37 are written in independent form, and belong to the second group. Claims 29, 31, 32 and 35 and claims 38 and 40 are dependent on amended independent claims 28 and 37, respectively, and belong to the third group.

The above-described particular feature of the present invention defined in claims 1 and 20 are brought into the dependent claims in the first group. The Applicants have already discussed Duncan, and do not repeat it.

Yanase discloses an electronic pad. As seen in the cross sectional views of the prior art electronic pad in figures 1, 4, 5, 8 and 10, Yanase's electronic pads are almost contact in thickness, and any pillars are not formed therein. Abe also discloses electronic percussion instruments, and the pad skin member (11) and (311) have respective cross sections almost constant in thickness as shown in figures 4, 5, 8 and 9A, and any pillars are not formed in the pad skin members (11) and (311). Thus, the particular feature of the present invention defined claims 1 and 20 is not taught by Yanase and Abe.

Even if the elastomeric pad electrode (1) of Duncan is introduced into Yanase and Abe or vice versa, the combined structure does not have the base held in contact with the accumulator regardless of the beat, and still suffers from the noise generated at the beats. Thus, the Applicants assert that the present invention defined in the claims of the first group are advantageous over the combinations between Duncan and Yanase/Abe.

Independent claims 28 and 37 of the second group explicitly recite that the base is held in contact with the accumulator regardless of the beats, advantageous over the combinations between Duncan and Yanase/Abe. Thus, the Applicants assert that the rejection to amended claims 28 and 37 should be withdrawn.

The remaining claims dependent on the amended independent claims are advantageous over the combinations by virtue of the particular feature discussed hereinbefore.

Applicants have responded to all of the rejections and objections recited in the Office Action. Reconsideration and a Notice of Allowance for all of the pending claims are therefore respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If the Examiner believes an interview would be of assistance, the Examiner is welcome to contact the undersigned at the number listed below.

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Respectfully submitted,

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